

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
St. Joseph Hospital Phosphine Release - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region V

**Subject:** POLREP #2  
Final Pollution Report  
St. Joseph Hospital Phosphine Release  
  
Ypsilanti, MI  
Latitude: 42.2647020 Longitude: -83.6568760

**To:** Bruce VanOtteren, MDEQ  
Mike Chezick, U.S. DOI  
David Chung, U.S. EPA  
Jason El-Zein, U.S. EPA  
Linda Nachowicz, U.S. EPA  
Jeff Kelley, U.S. EPA Region 5  
Mark Durno, U.S. EPA Region V  
Duty Office, USCG  
Joe Walczak, MDEQ  
Joe Malek, U.S. EPA

**From:** Lori Muller, On-Scene Coordinator

**Date:** 9/4/2011

US EPA RECORDS CENTER REGION 5



412663

**Reporting Period:** 4/26/2011 to 5/5/2011

## **1. Introduction**

### **1.1 Background**

<b>Site Number:</b>	<b>Contract Number:</b>
<b>D.O. Number:</b>	<b>Action Memo Date:</b>
<b>Response Authority:</b> CERCLA	<b>Response Type:</b> Emergency
<b>Response Lead:</b> EPA	<b>Incident Category:</b> Removal Action
<b>NPL Status:</b> Non NPL	<b>Operable Unit:</b>
<b>Mobilization Date:</b> 4/25/2011	<b>Start Date:</b> 4/25/2011
<b>Demob Date:</b> 5/5/2011	<b>Completion Date:</b> 5/5/2011
<b>CERCLIS ID:</b>	<b>RCRIS ID:</b>
<b>ERNS No.:</b>	<b>State Notification:</b>
<b>FPN#:</b>	<b>Reimbursable Account #:</b>

#### **1.1.1 Incident Category**

Emergency Response

#### **1.1.2 Site Description**

At approximately 1000 hours, on April 25, 2011, a private citizen attempted suicide by ingesting "poison peanuts" that contained zinc phosphide. The chemical reaction between the zinc phosphide and the individual's body resulted in the release of phosphine gas.

The individual was transported to St. Joseph Mercy Hospital, in Ypsilanti, Michigan, and was placed in a room in the hospital's Intensive Care unit. Due to the individual giving off phosphine gas, the doctors and nurses at the hospital were initially exposed to the gas, and, as a result, showed signs of exposure (e.g., difficulty breathing, nausea, etc.).

The hospital staff moved the individual to a second room in the hospital's Intensive Care unit which was placed under negative pressure. This action minimized the exposure to hospital personnel beyond those doctors and nurses who were directly caring for the individual.

Mr. Pierre Gonyon, St. Joseph's contact for facility safety, contacted the hospital's cleanup contractor, Arch Environmental Group, Inc. (Arch Environmental), of Farmington Hills, Michigan, and the Washtenaw County Hazardous Materials Response Authority (WCHMRA).

The workers from Arch Environmental worked to decontaminate surfaces and containerize the equipment and other materials in the first Intensive Care unit that came into direct contact with the individual.

WCHMRA used a Dräger Chip-Measurement System gas monitor to measure the

concentration of phosphine gas in the breathing zone of the patients room. These measurements indicated a concentration of phosphine gas between 0.1 and 0.3 ppm.

After depleting its inventory of phosphine chips, WCHMRA contacted the U.S. EPA, at 1627 hours, in order to obtain additional technical assistance and air monitoring equipment capable of monitoring for phosphine gas.

#### **1.1.2.1 Location**

St Joseph Hospital  
5301 McAuley Dr.  
Ypsilanti, MI 48197

#### **1.1.2.2 Description of Threat**

See section 1.1.2.

#### **1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

N/A

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

A summary of the evolving events was obtained from ATSDR as coordination efforts continue in the days following the initial response:

" Earlier today (4-27) the patient came out of his induced coma, pulled out the tubing from his endotracheal tube and became agitated. The phosphine readings became elevated, particularly as the hospital staff moved the PID monitor near his fecal matter, urine, and fluids from his trach tube. This set off the alarm on the PID, resulting in another HazMat response to the hospital with SCBAs. It was determined that the interaction of the sensor on the PID with the phosphine gas left a coating on the sensor that may have resulted in a falsely high reading. As of 5:00 PM ET on Wed. (4-27), the hospital has hired an Industrial Hygienist to coordinate air monitoring activities in the hospital, including maintenance and calibration of the equipment and documentation of the readings. "

On Monday, May 5, 2011, START returned to the hospital to retrieve the ToxiRae monitor because it was no longer needed by the hospital staff.

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### **2.1.2 Response Actions to Date**

See section 2.1.1.

### **2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

N/A

### **2.1.4 Progress Metrics**

N/A

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

## **2.2 Planning Section**

N/A

### **2.2.1 Anticipated Activities**

#### **2.2.1.1 Planned Response Activities**

#### **2.2.1.2 Next Steps**

#### **2.2.2 Issues**

## **2.3 Logistics Section**

N/A

## **2.4 Finance Section**

### **2.4.1 Narrative**

N/A

## **2.5 Safety Officer**

Lori Muller, U.S. EPA OSC

## **2.6 Liaison Officer**

N/A

## **2.7 Information Officer**

N/A

### **2.7.1 Public Information Officer**

### **2.7.2 Community Involvement Coordinator**

## **3. Participating Entities**

### **3.1 Unified Command**

N/A

### **3.2 Cooperating and Assisting Agencies**

U.S. Environmental Protection Agency  
U.S. EPA Technical Contractor (Dynamac Corporation)  
Washtenaw County Hazardous Materials Response Authority  
Arch Environmental Group, Inc.  
St. Joseph Mercy Hospital  
Agency for Toxic Substances and Disease Registry  
American College of Medical Toxicologists  
Disaster Mortuary Operational Response Team (DMORT)

## **4. Personnel On Site**

U.S. Environmental Protection Agency: FOSC Lori Muller  
Washtenaw County Hazardous Materials Response Authority: Victor Chevrete  
Arch Environmental Group, LLC: Michael Daul  
U.S. EPA Technical Contractor (Dynamac Corporation): Michael Browning  
St. Joseph Mercy Hospital: Pierre Gonyon

## **5. Definition of Terms**

N/A

## **6. Additional sources of information**

### **6.1 Internet location of additional information/reports**

N/A

### **6.2 Reporting Schedule**

N/A

**7. Situational Reference Materials**

N/A